



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,277	05/08/2001	Tac-Sung Jung	5649-894	3420
20792	7590	12/21/2006	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			CHEN, ALAN S	
PO BOX 37428			ART UNIT	PAPER NUMBER
RALEIGH, NC 27627			2182	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/21/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/851,277	JUNG ET AL.	
	Examiner	Art Unit	
	Alan S. Chen	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 October 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2,5,11,12 and 15 is/are rejected.
- 7) Claim(s) 3,4,6-10,13,14 and 16-20 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 May 2001 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/23/2006 have been fully considered but they are not persuasive. Applicant's argues that in the prior art to Adachi, the memory card supply voltage is not independent of the terminal voltage of the channel line. Applicant further argues that when combined with Kaneco, Adachi's channel lines still depends on the memory card supply voltage. Applicant's support for this is based on the premise that in Adachi, the voltage for the channel is set to match the detected operating voltage of the memory card.

Examiner does not deny that Adachi is matching the ***operating voltage level*** of the channel lines to what is required to operate the memory card. However the Applicant is equating ***supply voltage*** to operating voltage level, and the claim language certainly is not this narrow in scope. Referring to Fig. 1 of the specification, it is clear that "supply voltages" claimed are shown as VDD2 and VDD1 which is the ***source*** of the voltage, hence "supply voltage". Turning to Adachi combined with Kaneco, even if the ***operating voltage level*** of the memory card is the same as the channel line (Fig. 1, *the element 120 operates at 3V to match a memory card that also operates at 3V*), it is clearly evident that when combined with Kaneco, the supply voltages of the memory card, the memory card controller and the channel lines are indeed independent.

Element 14 in Adachi has a memory card that has battery supply voltage based on Kaneco. Element 120, the channel in Adachi, has a 3V supply voltage independent of the battery. Element 10, the controller in Adachi, has a 5V supply voltage that is

independent of the battery and the 3V supply. It should be noted that even given the possibility that the memory is not battery powered when attached to the device interface (*element 12 of Adachi*), the claim language does not recite any requirement for supply voltage operating during memory card attachment or memory card nonattachment. Examiner assumes it can be either of the above or a combination of the two.

The previous rejection is hereby maintained and reiterated below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1,2,5,11,12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Kaneko.

6. Per claims 1 and 11, Adachi discloses a memory interface system and data processing system (see FIGURE), comprising: at least one channel line (elements 122 and 124) that couples a memory (element 14, the memory card) to a memory controller (element 10), the at least one channel line being responsive to a terminal voltage (element 120 is attached to 3V power source to power the line) that is independent of a memory controller supply voltage (element 19, processing device is fixed to a 5V power source, element 130). Note, applicant uses "responsive" in the claims, however, nothing further limits this term. Adachi further discloses the memory card can be implemented in SRAM (Column 3, lines 40-45), which one of ordinary skill in the art knows that SRAM will lose memory once power is disconnected from it.

Adachi does not disclose expressly a battery power supply that resides within the memory card.

Kaneko expressly discloses a battery (element 51) resident in the memory card (element 50), expressly for the purpose of maintaining the data in the memory card when it is removed from the camera (see Background section of Kaneko).

Adachi and Kaneko are analogous art because they are from cameras utilizing memory cards that are volatile.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a battery in Adachi, one that is independent of all the other power supplies, in order to serve as the memory card power supply once the memory card is removed from the camera.

The suggestion/motivation for doing so would have been to retain data when memory card is detached from the camera.

Therefore, it would have been obvious to combine Adachi with Kaneko for the benefit of retaining memory card data regardless of connection or disconnection to the camera.

7. Per claims 2,5,12 and 15, Adachi combined with Kaneko disclose claims 1 and 11, wherein in Adachi one finds a memory card 14 that is either powered by a 3V or 5V source and read and writes are made to the memory card, which indicates transmitter and receivers are on the memory card. On the memory controller end, elements 25a and 25b show the transmitter/receiver for the memory controller. The transmitters and receivers are coupled by the channel lines, elements 122 and 124. In a situation when the memory card 14 is supplied at a 3V level, the switch 126 makes lines 122/124 and level shifter 20 and lines 114/112 responsive to the terminal voltage of the 3V camera supply, which is in turn independent of the camera's 5V supply.

Allowable Subject Matter

8. Claims 3,4,6-10,13,14 and 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, as previously stated.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC
12/13/2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER



12/15/06